PASADENASTARNEWS

Reclaiming wastewater part of the solution for a drying Los Angeles County

By Daniel Tedford Staff Writer
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While Southern California cities are considering mandatory water rationing, experts say San Gabriel Valley residents are wasting 45 million gallons of usable water every day.

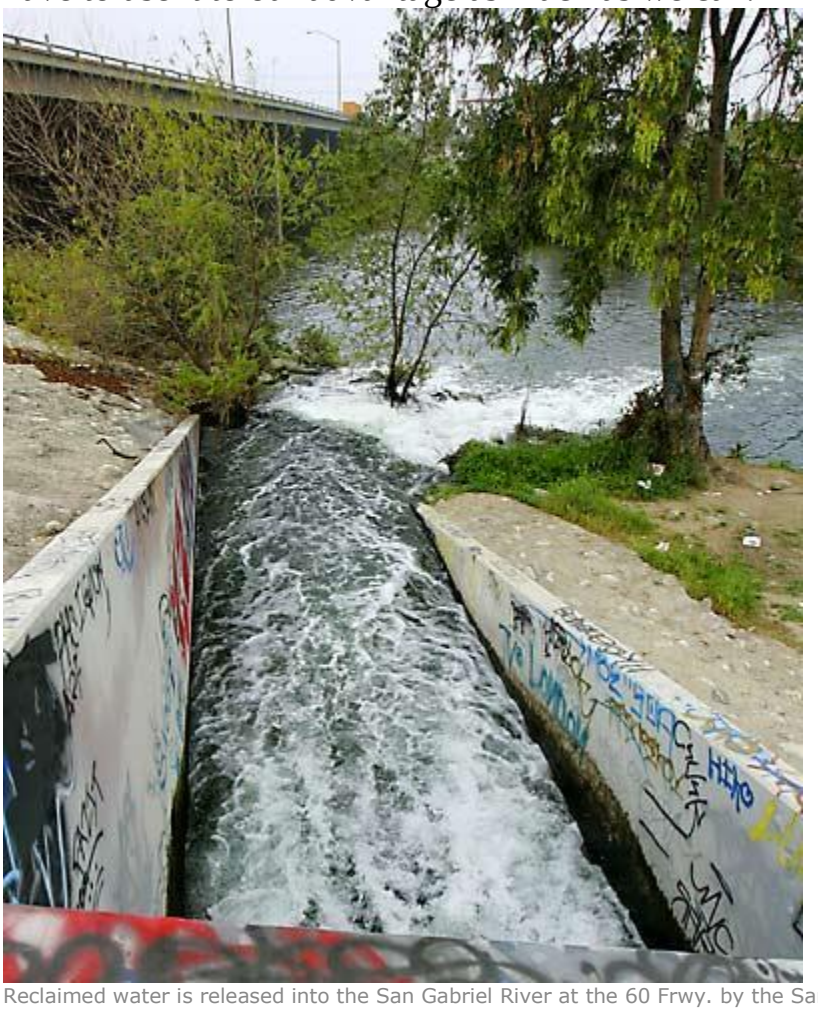
Photo Gallery:Water Reclamation

There is, of course, a catch.

That usable water is recycled sewage from sinks, showers and toilets.

But there is an increasing effort by experts to make use of our cleaned-up wastewater.

"It is a resource we have and we have paid for it - we paid to treat the water," said Azusa City Councilman Keith Hanks, a civil engineer for Los Angeles' Public Works Department. "We have to use it to our advantage as much as we can."



Reclaimed water is released into the San Gabriel River at the 60 Frwy. by the San Jose Creek Water Reclamation Plant in Whittier on Friday, March 20, 2009. Only about 35% of the 100 million gallons of water reclaimed per day are used for groundwater recharge and irrigation of parks, schools and greenbelts. The remainder of the purified water goes into the San Gabriel River at two locations, one being here and the other near Firestone Blvd. (SGVN/Staff Photo by Rau Roa/SVCity)

Water-treatment plants run by the Sanitation Districts of Los Angeles County recycle 469 million gallons a day. That's enough for 5,000 families.

At the three treatment plants in the San Gabriel Valley, 87 million gallons a day are processed. But only 42 million gallons are actually reused, said water recycling coordinator Earle Hartling.

"Part of my job is to do more. We haven't reached the end point where we are using all of our water," Hartling said. "We try and find markets for the recovered material. We turn wastewater into water supply, lemons into lemonade."

Pasadena is one of the cities in the county that is trying to expand the amount of recycled water it uses.

The city has a deal with a Glendale sewage plant that gives it rights to a percentage of the plant's recycled water, said Phyllis Currie, the head of Pasadena Water and Power.

The problem is the city does not yet have the pipe infrastructure needed to deliver the recycled water, which requires a new set of pipes so it does not mix with drinking water.

It hopes to have the pipes necessary in place by 2014 to serve some clients, including the Brookside Golf Course, several city parks, and some commercial clients.

That would only be the first phase of the plan - the city has additional clients lined up already. Even if it could serve all those additional clients, the city would still only be using about one-third of the water it has been allocated by the Glendale plant, said Currie.

Water has been a major concern for the city, just as it has been for the county as a whole.

Southern California is in a unique predicament when it comes to water use, experts said. Population growth, growing consumption, agriculture and climate change - not global warming, but a drying trend - have combined for a perfect storm for a drought, said USC Center for Sustainable Cities research professor Travis Longcore.

"We in Southern California live in this artificial landscape bubble. When we build here ... we essentially get rid of all the native vegetation, plant our own and water it," Longcore said. "The people who see the impacts of a lack of water are managers in agencies. The general public doesn't actually see it."

Despite the need, getting recycled water put to use has major obstacles.

It is costly, needs a separate pipe system, and as of now, doesn't reach everywhere.

"It is a lot more expensive and a lot more effort in putting in the distribution system," said Dave Bruns, the assistant department head for financial planning with the Sanitation Districts. "Somebody has to step up and put in the resources for the new distribution system. Right now, under law, that is the water company."

Recycled water goes through three stages of treatment. Stage one removes solids through skimming and filtering out items that fall to the bottom. Stage two uses oxygen to create microorganisms that eat "the bad stuff," experts said. The last stage uses filters and disinfectants to create water good enough for swimming, fish life and body contact.

"Water conservation and water recycling are becoming more and more prominent," said Bob Muir, spokesman for Metropolitan Water District. "Every drop that is recycled means you are freeing up the equal amount for potable uses."

While pure enough for other uses, most recycled water in the San Gabriel Valley goes to groundwater recharging.

"This is the premier way to use recycled water because it is not time-dependent. It is essentially filling a hole in the ground," Hartling said. "Just about half of what we use goes to groundwater recharge."

That water eventually becomes potable.

One of the best uses for recycled water is irrigation, Hartling said. Golf courses, cemeteries, parks and other large grass areas are optimal for the nutrient-rich water.

Another issue stalling broader use is storage. Most water comes in during daytime hours when people are using sewage items, but irrigation - where treated water is used - is usually done at night. And with millions of gallons waiting in line, there isn't a place to keep all the unused water. Instead it's dumped in rivers, which flow to the ocean.

Hartling tries to find other places for the water to go, namely industrial factories: a paper mill in Pomona, General Motors plant in South Gate, Rockwell in Downey. But when industries are the outlet, there is one major drawback.

"The economy can change on you," Hartling said. "They (all) went out of business."

The cost is being estimated for a pipeline from the Whittier treatment plant to cities surrounding Industry, Hartling said. If completed, the project would use nearly all the treatment water produced from the creek for irrigation.

"We are maximizing the use of what people have used in the past as a waste product, but it is a resource," Hartling said.

An advanced treatment center would add 20,000 acre-feet of water - enough for 100,000 people for a full year, Hartling said. One acre-foot is about 326,000 gallons.

In the end, Hanks sees projects like this and the prominence of wastewater as a natural solution to southern California's water issues.

"There is going to be more of us in a short period of time with no additional fresh water resources created," Hanks said. "That kind of demand makes the reuse of water inevitable."

SoCal Water

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